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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/774,202

02/06/2004

Nakshatra Saha

TI-36087

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08/09/2006

TEXAS INSTRUMENTS INCORPORATED

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EXAMINER

KO, DANIEL BOKMIN

ART UNIT

PAPER NUMBER

2189

DATE MAILED: 08/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/774,202

Applicant(s)

SAHA, NAKSHATRA

Examiner

Daniel B. Ko

Art Unit

2189

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 and 5-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date. _____  | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

This action is responsive to the Amendment filed on 5/24/2006.

Any objections and rejections from the prior correspondence not restated in this communication is/are withdrawn.

#### ***Claim Objections***

Claims 15 and 22 are objected to because of the following informalities: Claims 15 and 22 are depends from the cancelled claim 4. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-3, 6, 9, 11-15, 17-22, 24-26, and 28 are rejected under 35 U.S.C. 102(e) as being anticipated by See et al. (US Patent 6,839,823 B1), hereinafter simply See.

Regarding claims 1, 12, and 19, See teaches a flash memory data structure, comprising:

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fixed length cells, each having:

a control and identifier section for containing a unique identifier (Fig. 3, Identifier 302; column 4, lines 8-13) and a cell count for logically associating multiple of said fixed length cells (Fig. 3, Size 308; column 4, lines 8-23), and

a data section for containing only a configuration value pertaining to said unique identifier (Fig. 1, Data 114; column 3, lines 11-60) for a flash memory controller (Fig. 21, Micro-controller 2102; column 15, lines 25-50) and flash memory (Fig. 21, Flash Memory 2104; column 15, lines 25-50).

Regarding claims 2, 13, and 20, See teaches a data structure wherein said unique identifier is one byte long (column 8, lines 35-36) for a flash memory controller (Fig. 21, Micro-controller 2102; column 15, lines 25-50) and flash memory (Fig. 21, Flash Memory 2104; column 15, lines 25-50).

Regarding claims 3, 14, and 21, See teaches a data structure wherein one of said fixed length cells equals a minimum storage space for said configuration value (column 3, lines 38-46; column 15, lines 44-46) for a flash memory controller (Fig. 21, Micro-controller 2102; column 15, lines 25-50) and flash memory (Fig. 21, Flash Memory 2104; column 15, lines 25-50).

Regarding claims 6, 17, and 24, See teaches a data structure wherein said data section is located at an end of said fixed length cells (Fig. 2, column 3, lines 36-54).

Regarding claim 9, See teaches a data structure wherein said unique identifier corresponds a configuration parameter in a lookup table (column 3, lines 8-19).

Regarding claims 11, 18 and 25, See teaches a data structure wherein said control and identifier section is configurable such that said unique identifier and said cell count are located in subsequent bytes at the beginning of said control and identifier section (Fig. 2, column 3, lines 36-54; column 5, lines 44-67) for a flash memory controller (Fig. 21, Micro-controller 2102; column 15, lines 25-50) and flash memory (Fig. 21, Flash Memory 2104; column 15, lines 25-50).

Regarding claims 15 and 22, See teaches a flash memory controller (Fig. 21, Micro-controller 2102; column 15, lines 25-50) and flash memory (Fig. 21, Flash Memory 2104; column 15, lines 25-50).

Regarding claim 26, See teaches a method of writing to flash memory with fixed length cells, comprising:

locating a first of said fixed length cells that is free (Fig. 10, Step 1020; column 10, lines 2-4);

writing a unique identifier in a control and identifier section of said first free fixed length cell (Fig. 3, Identifier 302; column 4, lines 8-13);

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writing a configuration value pertaining to said unique identifier in a data section of said first free fixed length cell (Fig. 1, Data 114; column 3, lines 11-60); and updating a cell count in said control and identifier section to represent a number of said fixed length cells logically associated (Fig. 3; Size 308; column 4, lines 9-23).

Regarding claim 28, See teaches a method including searching said flash memory for a pre-existing configuration value having said unique identifier and marking said pre-existing configuration value as deleted (column 15, lines 14-18).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

2. Claims 5, 7-8, 10, 16, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over See et al. (US Patent 6,839,823 B1) in view of Cho et al. (US Patent 5,835,950), hereinafter simply Cho.

Regarding claims 5, 16 and 23, See teaches a flash memory data structure, comprising:

(a) a disk (column 4, lines 55-56; FIG.1, element 108);

fixed length cells, each having:

a control and identifier section for containing a unique identifier (Fig. 3, Identifier 302; column 4, lines 8-13) and a cell count for logically associating multiple of said fixed length cells (Fig. 3; Size 308; column 4, lines 9-23), and

a data section for containing only a configuration value pertaining to said unique identifier (Fig. 1, Data 114; column 3, lines 11-60) for a flash memory controller (Fig. 21, Micro-controller 2102; column 15, lines 25-50) and flash memory (Fig. 21, Flash Memory 2104; column 15, lines 25-50).

See fails to teach the fixed length cells are 32 bytes long. Cho teaches a block size of 32 bytes (column 6, lines 53-55, column 8, lines 29-30).

At the time of invention it would have been obvious to a person of ordinary skill in the art to combine the See with Cho. The motivation for doing so would be to support

the 32 bytes length cell that is commonly used to the See's invention (column 6, lines 53-55, column 8, lines 29-30).

Regarding claims 7 and 8, See teaches a flash memory data structure, comprising;

fixed length cells, each having:

a control and identifier section for containing a unique identifier (Fig. 3, Identifier 302; column 4, lines 8-13) and a cell count for logically associating multiple of said fixed length cells (Fig. 3; Size 308; column 4, lines 9-23), and

a data section for containing only a configuration value pertaining to said unique identifier (Fig. 1, Data 114; column 3, lines 11-60) for a flash memory controller (Fig. 21, Micro-controller 2102; column 15, lines 25-50) and flash memory (Fig. 21, Flash Memory 2104; column 15, lines 25-50).

See fails to teach using programming macro when configure a size of the data structure. Cho teaches macro program to do the functions (column 7, lines 47-49).

At the time of invention it would have been obvious to a person of ordinary skill in the art to combine the See with Cho. The motivation for doing so would have been an automation of configuring a length of the fixed cells by using Cho's macro program.



Regarding claim 10, it is clear that multiples of the identifier correspond to many configuration parameters such as 254 or any number.

3. Claims 27 and 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over See et al. (US Patent 6,839,823 B1) in view of Lee et al. (US Patent 5,870,520), hereinafter simply Lee.

Regarding claim 27, See teaches a method of writing to flash memory with fixed length cells, comprising:

locating a first of said fixed length cells that is free (Fig. 10, Step 1020; column 10, lines 2-4);

writing a unique identifier in a control and identifier section of said first free fixed length cell (Fig. 3, Identifier 302; column 4, lines 8-13);

writing a configuration value pertaining to said unique identifier in a data section of said first free fixed length cell (Fig. 1, Data 114; column 3, lines 11-60); and

updating a cell count in said control and identifier section to represent a number of said fixed length cells logically associated (Fig. 3, Size 308; column 4, lines 9-23).

See fails to teach updating a checksum of the configuration value. Lee teaches a checksum to determine validity (column 3, lines 32-33; column 5, lines 3-16).

At the time of invention it would have been obvious to a person of ordinary skill in the art to combine the See with Lee. The motivation for doing so would have been an

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error checking of configuration value by utilizing Lee's checksum method. It would validate the configuration value for any possible errors.

Regarding claim 29, See combined with Lee teaches a method including updating a global variable during system initialization (Lee, column 6, lines 10-14) with an address of a first of said fixed length cells that is free (See, column 10, lines 2-4).

Regarding claim 30, Lee teaches a method further including testing said configuration value to determine completeness (column 11, lines 37-40).

Regarding claim 31, See combined with Lee teach a method including updating said cell count (See, Fig. 3; Size 308; column 4, lines 9-23; column 5, lines 13-46) and marking said configuration value as deleted when determining said configuration value is not complete (See, column 15, lines 14-18); and

updating said cell count (Fig. 3; Size 308; column 4, lines 9-23; column 5, lines 13-46) and a checksum of said configuration value when determining said configuration value is complete (Lee, column 3, lines 32-39; column 5, lines 3-16).

Regarding claim 32, Lee teaches a method including validating checksums of each of said fixed length cells (column 3, lines 32-39; column 5, lines 3-16).

***Response to Arguments***

Applicant's arguments filed 5/24/06 have been fully considered but they are not persuasive.

Claims 1, 12, and 19

Regarding claims 1, 12, and 19, Applicant argues that See does not teach a cell count.

In response, it is noted that paragraph 25 of Applicant's specification said "The cell count enables the configuration value to have a size that is not constrain by a size of the fixed length cells". See teaches equivalent limitations, which are called SIZE (Fig. 3, SIZE 306; column 4, lines 9-23) and TYPE (Fig. 3, TYPE 306; column 4, lines 28-36).

Applicant also argues that See does not teach a data section for containing only a configuration values pertaining to said unique identifier.

In response, it is noted that Fig. 2 shows how data is identified and stored within one of the individual blocks allocated to the data storage portion (column 3, lines 36-60).

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel B. Ko whose telephone number is 571-272-8194.

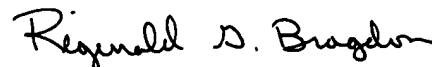
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Reginald G. Bragdon can be reached on 571-272-4204. The fax phone number for the organization where this application or proceeding is assigned is 703-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Daniel B. Ko  
AU 2189



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